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10/688,694	10/17/2003	Carl E. Altman	H0004484	2369

7590 05/11/2006

Honeywell International Inc.  
15801 Woods Edge Road  
Colonial Heights, VA 23834

EXAMINER
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DANIELS, MATTHEW J

ART UNIT	PAPER NUMBER
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1732

DATE MAILED: 05/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/688,694

Applicant(s)

ALTMAN, CARL E.

Examiner

Matthew J. Daniels

Art Unit

1732

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 20 April 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1,3-12,14-21,23-25,28 and 29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-12,14-21,23-25,28 and 29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 4/20/06.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

1. Claims 1, 3-12, 14-21, 23-25, 28, and 29 are pending in this case. Claim 28 was amended in the response filed 20 April 2006.

#### *Claim Rejections - 35 USC § 112*

2. The rejection set forth previously under this section are withdrawn. The support for the limitation "at least about 1.5:1" is noted on page 2, line 30. Support for the new limitation is found on page 5, line 9 of the specification. Either version is fully supported.

#### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 1 and 3-12** are rejected under 35 U.S.C. 103(a) as obvious over Mizuno (USPN 5833070) in view of Choy (Polymer, Vol. 21 (5), May 1980, pages 569-576) and Khanna (Polymer, Vol. 32 (11), 1991, pages 2010-2013). **As to Claim 1**, Mizuno teaches:
  - a) extruding molten PCTFE polymer (Column 5)
  - b) cooling the PCTFE polymer to a temperature below its melting point to form a film that is crystalline (6:1-5, crystalline content is inherent in that the film is still crystalline after stretching, see 4:53-58)

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c) orienting the PCTFE film while in its crystalline state by stretching the film at a stretch ratio of at least about 1.5:1 while holding the film under tension and (See areal stretch ratio of 3 times, 6:7-10, which is inherently at least 1.5 in biaxial stretching, greater in uniaxial stretching)

d) wherein the resulting film has a water vapor transmission rate of less than about 0.775 g/meter squared/day (See 3:10-15 for % crystallinity, ratio shown in 3:17-18, and 4:59-67). In particular, see Mizuno's teaching of the formula (3:17-18) that  $B/(100-A)$  is less than or equal to 3.0. By the Examiner's calculation, Mizuno's teaching of A (% crystallinity) being 15 to 75% provides the following teachings about the permeability:

$B/(100-A)$  is less than or equal to 3.0 (See Mizuno, 3:17-18)

A is percent crystallinity (3:13-14)

B is **mg**/square meter \* day (3:14-15)

When A = 15% crystallinity (3:13-14), then  $B/(100-15)$  is less than or equal to 3.0

Therefore, B is less than or equal to  $3.0 * (100-15) = 3.0 * 85 = 255$  **mg**/square meter day

Therefore, B is less than or equal to 0.255 g/square meter day, anticipating the resulting PCTFE water vapor transmission rate

$B/(100-A)$  is less than or equal to 3.0 (See Mizuno, 3:17-18)

A is percent crystallinity (3:13-14)

B is **mg**/square meter \* day (3:14-15)

When A = 75% crystallinity (3:13-14), then  $B/(100-75)$  is less than or equal to 3.0

Therefore, B is less than or equal to  $3.0 * (100-75) = 3.0 * 25 = 75$  **mg**/square meter day

Therefore, B is less than or equal to 0.075 g/square meter day, anticipating the resulting PCTFE water vapor transmission rate

Mizuno does not explicitly teach the limitation that the film has a crystallinity from about 10 to about 45% prior to orienting the film (parts b and c of Claim 1). However, in this respect, Mizuno clearly suggests and finds it desirable to quench the sheet after extrusion to suppress crystallization, which facilitates the stretching thereof (Mizuno, 6:2-6).

Khanna teaches that when polychlorotrifluoroethylene samples are quenched, they contain 15% (Page 2013, left column "D.s.c of a quenched copolymer...") to 50% (Page 2012, right column, Differential Scanning Calorimetry) crystallinity despite the quenching process.

Additionally, Choy teaches that quenching a sample produces produces 39% crystallinity (Page 572, right column, Mechanical anisotropy of drawn materials, and Page 569, right column).

Mizuno teaches that it is desirable to quench the sample to suppress crystallinity to facilitate stretching. However, the additional references cited teach that even when a PCTFE sample is quenched, that it still contains 15% to 50% crystallinity. It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to incorporate the methods of Khanna and Choy into that of Mizuno because Mizuno specifically suggests suppressing crystallinity, and Khanna and Choy teach that crystallinity can only be suppressed to a level of 15% to 50%, within the claimed range.

**As to Claim 3**, it was presented in the rejection of Claim 1 that Mizuno teaches that it is desirable to suppress crystallinity by quenching. The disclosures of Khanna and Choy were also presented to show that despite quenching a PCTFE sample, that 15% to 50% crystallinity is still found in the sample. These values encompass the claimed range. **As to Claims 4 and 5**: See

4:41-42. **As to Claims 6 and 7:** See 6:7-10 which teaches all areal stretching ratios between 3 and 64 times. **As to Claims 8 and 9:** See 3:10-15 for % crystallinity, ratio shown in 3:17-18, and 4:59-67. **As to Claim 10,** Mizuno teaches that the stretch affect produces a portion of the water-proofness (4:59-67), and therefore it would have been obvious to expect a decrease in the water vapor transmission rate when comparing Mizuno's stretched and unstretched films.

Although silent to the 20% sought by the instant claims, it would have been obvious to expect at least a 20% decrease in water vapor transmission by stretching. **As to Claims 11 and 12:** See Column 6, particularly 6:16-23.

4. **Claims 14-21, 23-25** are rejected under under 35 U.S.C. 103(a) as obvious over Mizuno (USPN 5833070) in view of Choy (Polymer, Vol. 21 (5), May 1980, pages 569-576) and Khanna (Polymer, Vol. 32 (11), 1991, pages 2010-2013), and further in view of DeAittonis (USPN 4677017). **As to Claim 14,** Mizuno teaches:

a) extruding molten PCTFE polymer (Column 5)

b) cooling the PCTFE polymer to a temperature below its melting point to form a film that is crystalline (6:1-5, crystalline content is inherent in that the film is still crystalline after stretching, see 4:53-58)

c) orienting the PCTFE film while in its crystalline state by stretching the film at a stretch ratio of at least about 1.5:1 (See areal stretch ratio of 3 times, 6:7-10, which is inherently at least 1.5:1 in biaxial stretching, greater in uniaxial stretching) with draw rolls (6:24-25) which would have inherently had at least one faster roller and one slower roller to produce uniaxial drawing

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d) collecting the oriented film would have been inherent or obvious in that the film is used to form a packaged product (11:8-10), wherein the resulting film has a water vapor transmission rate of less than about 0.775 g/meter squared/day (See 3:10-15 for % crystallinity, ratio shown in 3:17-18, and 4:59-67). In particular, see Mizuno's teaching of the formula (3:17-18) that  $B/(100-A)$  is less than or equal to 3.0. By the Examiner's calculation, Mizuno's teaching of A (% crystallinity) being 15 to 75% provides the following teachings about the permeability:

$B/(100-A)$  is less than or equal to 3.0 (See Mizuno, 3:17-18)

A is percent crystallinity (3:13-14)

B is **mg**/square meter \* day (3:14-15)

When A = 15% crystallinity (3:13-14), then  $B/(100-15)$  is less than or equal to 3.0

Therefore, B is less than or equal to  $3.0 * (100-15) = 3.0 * 85 = 255$  **mg**/square meter day

Therefore, B is less than or equal to 0.255 **g**/square meter day, anticipating the resulting

PCTFE water vapor transmission rate

$B/(100-A)$  is less than or equal to 3.0 (See Mizuno, 3:17-18)

A is percent crystallinity (3:13-14)

B is **mg**/square meter \* day (3:14-15)

When A = 75% crystallinity (3:13-14), then  $B/(100-75)$  is less than or equal to 3.0

Therefore, B is less than or equal to  $3.0 * (100-75) = 3.0 * 25 = 75$  **mg**/square meter day

Therefore, B is less than or equal to 0.075 **g**/square meter day, anticipating the resulting

PCTFE water vapor transmission rate

Mizuno is silent to the casting roll, and does not explicitly teach the limitation that the film has a crystallinity from about 10 to about 45% prior to orienting the film (parts b and c of Claim 14).

However, casting rolls were known and obvious in the art at the time of the invention. For example, DeAntonis teaches casting onto a casting roller (9:10-12). It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to incorporate the method of DeAntonis into that of Mizuno in order to produce a clear film having a uniform appearance (9:24-26), and additionally to produce rapid temperature adjustment.

As to the crystallinity, Mizuno clearly suggests and finds it desirable to quench the sheet after extrusion to suppress crystallization, which facilitates the stretching thereof (Mizuno, 6:2-6). Khanna teaches that when polychlorotrifluoroethylene samples are quenched, they contain 15% (Page 2013, left column "D.s.c of a quenched copolymer...") to 50% (Page 2012, right column, Differential Scanning Calorimetry) crystallinity despite the quenching process. Additionally, Choy teaches that quenching a sample produces produces 39% crystallinity (Page 572, right column, Mechanical anisotropy of drawn materials, and Page 569, right column). Therefore, Mizuno teaches that it is desirable to quench the sample to suppress crystallinity to facilitate stretching. However, the additional references cited teach that even when a PCTFE sample is quenched, that it still contains 15% to 50% crystallinity.

It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to incorporate the methods of DeAntonis, Khanna, and Choy into that of Mizuno in order to produce a clear film having a uniform appearance (DeAntonis, 9:24-26), and additionally to produce rapid temperature adjustment, and because Mizuno specifically suggests



suppressing crystallinity, and Khanna and Choy teach that crystallinity can only be suppressed to a level of 15% to 50% when quenching a sample, values that are within the claimed range.

Mizuno, DeAntonis, Khanna, and Choy additionally teach the following:

**Claim 15:** See DeAntonis, 9:14

**Claims 16 and 17:** See DeAntonis, 9:10-12

**Claims 18 and 19:** See Mizuno, 6:8-11. It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to perform drawing with draw rolls maintained at these temperatures in the combined method

**Claims 20 and 21:** See Mizuno, 6:7-10, which teaches all areal stretching ratios between 3 and 64 times, encompassing the claimed stretch ratios in either uniaxial or biaxial stretching

**Claim 23:** it was presented in the rejection of Claim 14 that Mizuno teaches that it is desirable to suppress crystallinity by quenching. The disclosures of Khanna and Choy were also presented to show that despite quenching a PCTFE sample, that 15% to 50% crystallinity is still found in the sample. These values encompass the claimed range. See the citations to Khanna and Choy from Claim 14.

**Claims 24 and 25:** See Mizuno, 4:41-42

5. **Claims 28-29** are rejected under 35 U.S.C. 103(a) as obvious over Mizuno (USPN 5833070) in view of Choy (Polymer, Vol. 21 (5), May 1980, pages 569-576) and Khanna (Polymer, Vol. 32 (11), 1991, pages 2010-2013), and further in view of DeAntonis (USPN 4677017). **As to Claim 28**, it is noted that this claim contains substantially the same method limitations as set forth in Claim 14, with the additional new limitation that the process is

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continuous and “without winding up said PCTFE polymer film.” However, it has been held that the difference between a batch process and a continuous process is prima facie obvious. See MPEP 2144.04(III)(E) and *In re Dilnot*, 319 F.2d 188, 138 USPQ 248 (CCPA 1963) (Claim directed to a method of producing a cementitious structure wherein a stable air foam is introduced into a slurry of cementitious material differed from the prior art only in requiring the addition of the foam to be continuous. The court held the claimed continuous operation would have been obvious in light of the batch process of the prior art.).

Additionally, it is unclear how Mizuno’s process is purported to be a batch process having a winding operation. Therefore, the Examiner submits that Mizuno teaches the following:

- a) extruding molten PCTFE polymer (Column 5)
- b) cooling the PCTFE polymer to a temperature below its melting point to form a film that is crystalline (6:1-5, crystalline content is inherent in that the film is still crystalline after stretching, see 4:53-58)
- c) orienting the PCTFE film while in its crystalline state by stretching the film at a stretch ratio of at least about 1.5:1 (See areal stretch ratio of 3 times, 6:7-10, which is inherently at least 1.5:1 in biaxial stretching, greater in uniaxial stretching) with draw rolls (6:24-25) which would have inherently had at least one faster roller and one slower roller to produce uniaxial drawing
- d) collecting the oriented film would have been inherent or obvious in that the film is used to form a packaged product (11:8-10), wherein the resulting film has a water vapor transmission rate of less than about 0.775 g/meter squared/day (See 3:10-15 for % crystallinity, ratio shown in 3:17-18, and 4:59-67). In particular, see Mizuno’s teaching of the formula (3:17-18) that

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$B/(100-A)$  is less than or equal to 3.0. By the Examiner's calculation, Mizuno's teaching of A (% crystallinity) being 15 to 75% provides the following teachings about the permeability:

$B/(100-A)$  is less than or equal to 3.0 (See Mizuno, 3:17-18)

A is percent crystallinity (3:13-14)

B is **mg**/square meter \* day (3:14-15)

When A = 15% crystallinity (3:13-14), then  $B/(100-15)$  is less than or equal to 3.0

Therefore, B is less than or equal to  $3.0 * (100-15) = 3.0 * 85 = 255$  **mg**/square meter day

Therefore, B is less than or equal to 0.255 **g**/square meter day, anticipating the resulting PCTFE water vapor transmission rate

$B/(100-A)$  is less than or equal to 3.0 (See Mizuno, 3:17-18)

A is percent crystallinity (3:13-14)

B is **mg**/square meter \* day (3:14-15)

When A = 75% crystallinity (3:13-14), then  $B/(100-75)$  is less than or equal to 3.0

Therefore, B is less than or equal to  $3.0 * (100-75) = 3.0 * 25 = 75$  **mg**/square meter day

Therefore, B is less than or equal to 0.075 **g**/square meter day, anticipating the resulting PCTFE water vapor transmission rate

Mizuno is silent to the casting roll, and does not explicitly teach the limitation that the film has a crystallinity from about 10 to about 45% prior to orienting the film (parts b and c of Claim 14).

However, casting rolls were known and obvious in the art at the time of the invention. For example, DeAntonis teaches casting onto a casting roller (9:10-12). It would have been

prima facie obvious to one of ordinary skill in the art at the time of the invention to incorporate the method of DeAntonis into that of Mizuno in order to produce a clear film having a uniform appearance (9:24-26), and additionally to produce rapid temperature adjustment.

As to the crystallinity, Mizuno clearly suggests and finds it desirable to quench the sheet after extrusion to suppress crystallization, which facilitates the stretching thereof (Mizuno, 6:2-6). Khanna teaches that when polychlorotrifluoroethylene samples are quenched, they contain 15% (Page 2013, left column "D.s.c of a quenched copolymer...") to 50% (Page 2012, right column, Differential Scanning Calorimetry) crystallinity despite the quenching process. Additionally, Choy teaches that quenching a sample produces produces 39% crystallinity (Page 572, right column, Mechanical anisotropy of drawn materials, and Page 569, right column). Therefore, Mizuno teaches that it is desirable to quench the sample to suppress crystallinity to facilitate stretching. However, the additional references cited teach that even when a PCTFE sample is quenched, that it still contains 15% to 50% crystallinity.

It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to incorporate the methods of DeAntonis, Khanna, and Choy into that of Mizuno in order to produce a clear film having a uniform appearance (DeAntonis, 9:24-26), and additionally to produce rapid temperature adjustment, and because Mizuno specifically suggests suppressing crystallinity, and Khanna and Choy teach that crystallinity can only be suppressed to a level of 15% to 50% when quenching a sample, values that are within the claimed range. **As to Claim 29**, Mizuno clearly teaches that draw ratio is a result effective variable (6:7-15). One of ordinary skill would have been motivated and found it prima facie obvious to optimize the draw ratio in order to impart a particular moisture permeability or tactile feel to the sheet (4:53-58).

See MPEP 2144.05 II and *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Additionally, it should also be noted that Choy teaches draw ratios of *1 to 3* (Figure 1, page 570), and also appear to disclose draw ratio as being a result-effective variable that one of ordinary skill would have optimized.

### ***Response to Arguments***

6. Applicant's arguments filed 20 April 2006 have been fully considered but they are not persuasive. The arguments appear to be on the following grounds:

a) (page 9) The final rejection relies on the disclosure of two secondary references to suggest that any type of quenching will inherently result in a crystallinity level within the claimed range.

Applicants submit that this supposition is incorrect. Khanna and Choy are not dealing with thin films. Khanna and Choy refer to a thicker plaque of 1.25 to 1.5 mm. Thus the levels of crystallinity are for thick plaques which have thickness at least an order of magnitude greater than the film of Mizuno. A thick plaque acts differently when quenched, and its center will be crystalline.

b) Mizuno states that a high molecular weight polymer in order to suppress crystallization. This makes it clear that the extruded film of Mizuno has a low crystallinity to avoid difficulties in stretching. As in the method of Levy, the film must be "substantially amorphous". Levy shows that the stretching operation does increase crystallinity. This rebuts the Examiner's statement that "orientation would not, by itself, increase the percentage crystallinity".

c) Khanna's suggestion of a Tg for PCTFE only peripherally is related to the crystallinity of PCTFE, and only for thick molded plaques. One cannot make a leap to the thin film that is quenched.

d) An article by Murthy is submitted to show that crystallinities in PCTFE polymers as low as 11% have been measured by X-ray diffraction. Murthy also discloses that PCTFE films can have crystallinities ranging from 11% to 77% when studied by X-ray diffraction, the technique employed in the instant application and in Levy. The crystallinity levels determined by X-ray diffraction depend on the thermal treatment of the sample. Murthy states that crystallinities determined by DSC are consistently higher or lower than those determined by XRD. The various PCTFE samples do not necessarily have to have crystallinity ranges mentioned in those prior publications.

e) Mizuno describes the stretched PCTFE film as having a crystallinity of 15% to 75%, and "it is known that stretching increases the crystallinity level." (page 15, remarks) Thus, to obtain a final crystallinity of 15%, "it is clear that the starting crystallinity must be below that number," (page 15, remarks)

f) It can only be assumed that the rejection of Claim 10 is speculating on a decrease in water vapor transmission rate without any supporting facts, and can only be sustained by improperly using Applicant's disclosure against him.

g) DeAntonis fails to provide the missing features of the other references.

h) None of the cited references teach the continuous process. The instant process avoids the winding step.

i) The Final rejection over a new combination of references is improper.

7. These arguments are not persuasive for the following reasons:

a) It is respectfully submitted that Applicant's arguments are not believed to be correct in the characterization of the references. See, in particular, Choy's teaching on page 572, left column, under the section heading *Crystallinity dependence of mechanical data*, where Choy teaches that quenching of a thin, 0.3 mm sheet from the melt to room temperature, which produces a crystallinity of 21% (denoted as " $\chi$ " in this article). This film is neither at least an order of magnitude greater than the film of Mizuno, nor outside the crystallinity range claimed in the instant claims. It should additionally be noted that Mizuno's Table 1 (column 10) shows stock sheet thickness of 0.18 to 0.45 mm (180 to 450 microns).

Additionally, it should be noted that Applicant's arguments appear to distinguish the invention by the structure of the material at an intermediate state between process steps and by the water vapor transmission rate of the stretched film. These limitations are drawn to structures and properties, and do not appear to distinguish the stepwise process limitations from those of the prior art. The Applicant's arguments do not appear to dispute Mizuno's teaching of the claimed step (a), extruding molten PCTFE, but only dispute that the same intermediate product is not formed. However, the process limitations which Applicant asserts to cause the alleged differences have not been set forth in the claims.

b and c) The Examiner submits that Choy's teaching cited above and in the previous final rejection is sufficient to show the obviousness of quenched PCTFE films having the claimed crystallinity ranges. In response to Applicant's remarks regarding Levy, it should be noted that common definitions of "substantial" do not require any particular percentages, and this language

may be interpreted broadly. Levy appears to teach that stretching increases crystallinity, however, Choy also rebuts this position by teaching that upon drawing, the superstructure remains essentially a random aggregation of crystallites but the crystalline chains tend to orient in the draw direction, and also that the amorphous chains also orient and contribute to the total birefringence (page 570, right column). Choy's teachings appear to suggest to the ordinary artisan that the superstructure remains essentially a random aggregation of crystals, and Choy does not appear to teach or suggest that new crystals are formed by drawing.

d) It is unclear what the newly cited article shows over those already of record. For the cited sample (sample J in Table 1), the dash in the "Thermal History" column indicates that the history for this sample is unknown, and thus it is unclear how Applicant's remarks relate a sample having an unknown thermal history and its crystallinity to the instant claims and references cited.

e) The Examiner submits that in the case that the Applicant's arguments are correct in stating that drawing increases crystallinity, the Applicant's remarks have not related this conclusion to the scope of the claim. In order to avoid the prior art, it should be shown that Mizuno's samples did not fall within the scope of the claim.

f) The Examiner respectfully disagrees and suggests instead that the claimed process steps are taught, and thus by performing only these process steps, formation of the claimed properties should be implicit in the prior art.

g) The reference to DeAntonis was not particularly argued.

h) The same process steps are disclosed, and thus performing them all continuously does not appear to distinguish the instant invention. Does linking the process steps provide a materially different result than those of the prior art?



i) While it is noted that the previously amended claims included a change in scope of the independent claim, this rejection is made non-final.

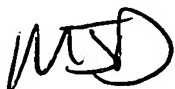
***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew J. Daniels whose telephone number is (571) 272-2450. The examiner can normally be reached on Monday - Friday, 7:30 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Colaianni can be reached on (571) 272-1196. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MJD 5/7/06



**MICHAEL P. COLAIANNI**  
**SUPERVISORY PATENT EXAMINER**